dup.
B17.5a

LIBRARY

1929

BRISTOL
PORT SANITARY AUTHORITY

ANNUAL REPORT
OF THE
PORT MEDICAL OFFICER
OF HEALTH

1929.

BRISTOL
PORT SANITARY AUTHORITY

ANNUAL REPORT

OF THE

PORT MEDICAL OFFICER OF HEALTH.

R. A. ASKINS, M.A., M.D., D.P.H.
BARRISTER-AT-LAW.

BRISTOL PORT SANITARY COMMITTEE

Chairman

Councillor J. E. Jones

Alderman H. J. Maggs, J.P.
Councillor E. T. Cozens
Councillor A. V. Despres
Councillor J. Owen
Councillor J. Priscott
Councillor Sir Lionel Goodenough Taylor
Councillor H. A. White
Councillor T. J. Wise

PORT SANITARY STAFF

MEDICAL OFFICERS

**Port Medical Officer of Health*

R. A. Askins, M.A., M.D., D.P.H., Barrister-at-Law.

**Assistant Port Medical Officer of Health*

R. H. Parry, M.B., B.S. Lond., D.P.H.

SANITARY OFFICERS

**Chief Inspector,* J. A. Robinson, *1.2.*

Inspectors

E. H. Scorrer, *1.2.*
W. R. Gibbs, *1.2.*
C. W. Gould, *1.2.3.*
R. M. Scorrer. *1.2.*

Assistant Inspectors

J. B. Machin, *3.* C. A. Sampson

Rat Catchers

*C. H. Ryman
*C. Gill
*C. Scorrer
*E. R. Poole

1. Certificated Sanitary Inspector.
2. Certificated Meat and Food Inspector.
3. Master Mariners' Certificate.
* Also engaged in the City.

INSPECTION OF ALIENS

Supervising Medical Inspector, R. A. Askins, M.D., D.P.H.
Medical Inspector, R. H. Parry, M.B., B.S.

CONTENTS, 1929

INTRODUCTION ... ... PAGE 5

1. AMOUNT OF SHIPPING ENTERING THE PORT (Table A) ... 8

2. CHARACTER AND TRADE OF PORT 8
   - (*a*) Passenger traffic (Table B)
   - (*b*) Cargo traffic, countries with which the Port principally trades 9

3. SOURCE OF WATER SUPPLY 11

4. INFECTIOUS DISEASE 11
   - Venereal disease, ... 13
   - Grain-mite dermatitis 15
   - Sickness landed from vessels (Table C) 16
   - Special reports on infectious sickness arriving in the Port 17
   - Sickness occurring on vessels during voyage, but disposed of prior to arrival (Table D) ... 18
   - Infectious disease on vessels or disposed of prior to arrival, (Table *II*). 19
   - Deaths reported on arrival, (Table *III*). 20

5. MEASURES AGAINST RODENTS 21
   - Rats destroyed (Tables E and F) 24
   - Particulars relating to plague "infected" or "suspected" vessels (Table G) 25
   - Measures of rat destruction on vessels from plague infected ports—other than those included in Table G (Table H) 25
   - Measures of rat destruction on other vessels (Table I) 26

6. HYGIENE OF CREWS' SPACES 26
   - Classification of nuisances (Table J).

7. FOOD INSPECTION 27
   - (*a*) Report on Public Health (Imported Food) Regulations, 1925, Public Health (Imported Milk) Regulations, 1926, Public Health (Preservatives in Food) Regulations 1925–1927.
   - (*b*) Shell-fish 29
   - (*c*) Reports on bacteriological and chemical examinations of food and water samples from vessels 29

MISCELLANY.

- DANGEROUS DRUGS ACT, 1920 30
- REPORT ON CANAL BOATS ACT, 1884 30
- REPORT ON MEDICAL INSPECTION OF ALIENS 31

BRISTOL PORT SANITARY AUTHORITY

ANNUAL REPORT, 1929

MY LORD MAYOR, LADIES AND GENTLEMEN,

I have the honour to present to you my Annual Report as Port Medical Officer of Health for the year 1929.

The duties imposed upon the Port Sanitary Authority consist in preventing the introduction of infectious disease, in the inspection of imported food, and the inspection and examination of aliens. At the same time, steps are taken to maintain the sanitary condition of crews' quarters on all vessels entering the port.

In regard to infectious diseases special precautions are taken with inward ships which have come from or have visited during their voyage any port where the diseases cholera, plague, yellow fever, typhus fever or smallpox, are known or suspected to have occurred during the last six months. In the case of plague it is necessary to guard against the introduction of rodent plague in rats, and this involves the adoption of measures to prevent the passage of rats from ships to the shore. On paper the results may not be very outstanding, as they are mostly negative, but the preventive work done at the port is of the first importance not only to the port and city but also to the whole country.

During the year under review, 1,021 ships arrived at Bristol ports from " foreign " countries, and 6,115 from coastwise, making a total from " foreign " and coastwise of 7,136, or more by 126 than during 1928. Of these ships, 174 were from ports known to have been infected by plague. Your medical officers visited 171 ships altogether and in nearly all these examined the crews. This compares with 119 ships visited during 1928. The port sanitary inspectors boarded 2,478 ships.

The number of cases of sickness landed from vessels arriving at the port was 129, in addition, 27 cases of infectious and other sickness were reported to have occurred on vessels during the voyage, but had been disposed of prior to arrival. Three cases of suspected bubonic plague were dealt with, but further investigation indicated that the cases were climatic buboes. An abnormal number of rats was found on board of one sailing vessel.

There was no case or suspected case of cholera, yellow fever, smallpox or typhus.

The medical inspectors of aliens inspected 294 aliens and subjected 38 of these to detailed examination. No certificates were issued during the year.

The rat catchers employed by the Docks (one) and Sanitary Committees (three) were transferred to the Health Committee and for nine months the re-organised staff has worked under the medical officer of health. This arrangement is producing most satisfactory results. During the last few months, it has been possible to examine systematically, for rats or rat indications, all buildings in the vicinity of the docks as well as all ships that enter the port. Marked diminution in rat harbourage is the very obvious result and no complaints are now received of damage done by rats.

The detection of rodent plague is one of the most important duties of the port sanitary authority. All ships from infected or suspicious ports were examined thoroughly for rat indications and wherever possible samples of rats were obtained for pathological examination for plague. In all 95 rats from these ships were examined during the year. In Table H (page 25) are found the number of ships dealt with in this manner and particulars concerning this work. For the purpose of sampling the rat population in the vicinity of the quays, 177 rats were examined pathologically, giving a total of 272 rats examined during the year as compared with 129 during 1928.

The numbers of certificates issued under Article 27 of the International Sanitary Convention of 1926 were as follows:—

22 deratisation and 38 deratisation exemption making a total of 60 as compared with 33 in 1928.

In view of the fact that all ships from foreign ports must produce a valid certificate as from the 1st January 1930 (Public Health—Deratisation of Ships—Regulations 1929) it is anticipated that the work in this direction will be greatly increased during the coming year and for this purpose a re-arrangement of the staff and their work in the port has been made.

I am, my Lord Mayor, Ladies and Gentlemen,

Your obedient servant,

R. A. ASKINS, M.D.,

Port Medical Officer of Health.

PORT OF BRISTOL

The Port of Bristol comprises the Avonmouth Docks, the City Docks, and the Portishead Dock, with a total water area of 176 acres, and a dock quayage of 30,690 feet. The Corporation of Bristol is the owner of the entire dock system. The storage capacity under the control of the port authority is about 250,000 tons, with a cold storage capacity of 500,000 cubic feet.

The chief imports are grain, oil, tobacco, fruit, flour and meal, provisions, timber and oilseeds. Over 10 per cent. of the grain imported into this country comes through Bristol. Over 80 acres of the dock estate are occupied by oil installations, including 136 tanks with a total capacity of over 78 million gallons. Twenty-eight per cent. of the tobacco imported into the United Kingdom enters Bristol, and the duty paid thereon every year amounts to about 25 million pounds. Over seven and a half million bunches of bananas enter the port annually, which is more than enters any other European port.

During 1929 the following vessels entered the docks :—

	Number	*Tonnage*
Foreign	1,021	2,311,747
Coastwise	6,115	1,118,056
Total...	7,136	3,429,803

As a distributing centre Bristol serves a large area with a population of over two and a half millions within a fifty mile radius.

I.—Amount of Shipping entering the Port during the year 1929.

(AVONMOUTH, PORTISHEAD AND BRISTOL DOCKS)

Table A.

		Number *	Tonnage *	Number inspected		Number reported to be defective	Number of vessels on which defects were remedied
				By the medical officer of health	By the sanitary inspector		
Foreign	Steamers	1,019	2,307,750	161	1,166	200	198
	†Motor ..			10	39	—	—
	Sailing ..	2	3,997	—	3	3	3
	Fishing	—	—	—	—	—	—
Total Foreign		1,021	2,311,747	171	**1,208	203	201
Coastwise	Steamers	4,813	975,611	—	792	77	77
	†Motor ..			—	221	19	19
	Sailing ..	1,302	142,445	—	257	19	19
	Fishing	—	—	—	—	—	—
Total Coastwise		6,115	1,118,056	—	1,270	115	115
Total foreign and coastwise		7,136	3,429,803	171	2,478	318	316

† Includes mechanically propelled vessels other than steamers.

* Figures supplied by Port Authority.

** The excess compared with the number of arrivals is due to the inclusion of vessels arriving from the Irish Free State, Channel Islands, etc., which the Port Authority include under coastwise.

II.—Character and Trade of Port.

(*a*) *Passenger Traffic during* 1929.

Table B.

No. of Passengers		1st Class	2nd Class	3rd Class	Trans-migrants	Total
Inwards ...	Aliens	285	—	22	—	307
	British	2,975	—	—	—	2,975
Outwards	Aliens	263	—	—	—	263
	British	2,706	—	—	—	2,706

Countries from which passengers principally arrived :—

Kingston (Jamaica), Trinidad, Barbados, Port Limon, Santa Marta, and Cristobal.

A regular mail and passenger service between Avonmouth and the British West Indies and central America is run by Messrs. Elders and Fyffes. Elder and Dempster vessels occasionally call with passengers from the West African ports.

(*b*) *Cargo Traffic.*

PRINCIPAL IMPORTS

Commodities			Tons
Grain	Quarters	3,768,540	774,665
Oilseeds		—	60,174
Oilcake		—	15,221
Flour and Meal		—	72,725
Fruit :			
Bananas	Bunches	7,495,354	119,275
Oranges and Lemons	Cases	351,291	17,710
Other Green Fruit		—	5,106
Canned		—	6,149
Dried		—	8,627
Metals and Ores :			
Brass		—	1,149
Copper		—	9,557
Iron		—	28,209
Lead		—	6,386
Spelter		—	10,828
Pyrites		—	6,280
Zinc Concentrates		—	41,649
Paper		—	51,892
Petroleum		—	456,925
Provisions :			
Bacon		—	1,130
Butter		—	1,848
Cheese		—	8,434
Lard		—	7,496
Frozen Meat		—	7,520
Sugar :			
Refined		—	9,908
Glucose		—	1,975
Molasses		—	3,739
Tobacco		—	28,090
Wine	Pipes	4,813	3,209
,,	Dozens	2,089	52
Spirits	Puncheons	124	79
,,	Dozens	40,042	803
Wood Goods		—	127,521
All other goods		—	215,284
Total Foreign Imports			2,109,615

PRINCIPAL EXPORTS

Commodities	Tons
Chemicals :	
Saltcake	12,926
Other kinds	3,063
Clay	18,628
Coke	18,405
Earths	3,820
Metals :	
Iron	87,183
Tinplates	11,319
Oil	635
Paper	2,846
Strontia	3,272
Zinc Concentrates	17,825
All other Goods	21,542
Total Foreign Exports	201,464

The Port of Bristol comprises the Bristol City Docks, the Avonmouth and Portishead Docks. There is a considerable grain import from Canada, the United States, South America, Australia, India and the Persian Gulf. Motor spirit and other petroleum products are important items in the Port's trade. Bristol is the first port in the Kingdom for the banana trade from West Indies and Central America. The general cargo trade between the Port and Canada, United States and the European Continent is well maintained. The import trade from Australia and New Zealand consists of frozen produce, provisions and general goods, and in return galvanised iron, tin plates and general goods are exported.

Countries with which the Port principally trades.

FOREIGN COUNTRIES

Russia
Sweden
Norway
Finland
Belgium
Germany
Netherlands
France
Portugal
Spain
Italy
Greece
Egypt
Rumania
Tunis
Algeria
Morocco
West Africa
Persia
U.S.A.
Haiti
Mexico
Honduras
Costa Rica and Colombia
Chili
Argentine Republic

BRITISH POSSESSIONS

Cyprus
British West Africa
British South Africa
Iraq
British India
Straits Settlements
Australia
New Zealand
Canada
British West Indies

List of ports abroad from which ships have arrived	1929
Africa (North, 31 ; South, 4 ; East, 10 ; West, 14)	59
Alexandria and Cyprus	11
Australia and New Zealand	50
Black Sea	23
Bombay, Calcutta, Rangoon and Karachi	22
Canada	47
Channel Islands	55
China and the Far East	2
Curacao (Dutch West Indies)	13
East Indies	4
France	109
Germany	75
Holland and Belgium	93
Irish Free State	142
Italy	6
Jamaica and Santa Marta	75
New Orleans and Gulf of Mexico	40
Newport News, Norfolk, Va., and Savannah	17
New York and Portland, Maine	44
Norway, Sweden and Denmark	80
Persian Gulf	27
Peru and Chili	1
Philadelphia and Baltimore	30
Poland	1
River Plate	50
Rumania	7
Russia and Finland	23
San Francisco and Portland, Or.	28
Spain and Portugal	60
Trinidad and Barbadoes	10
Turkey in Asia	4
Total	1,208

III.—Source of Water Supply.

(*a*) *For the Port.*

(*b*) *For shipping.*

The water used in the port and by ships in the docks is supplied by the Bristol Water Works Company.

(*c*) *No. of water boats and their sanitary condition.*

There are no water boats in use at Avonmouth or Portishead, as hydrants are provided on the quayside.

One water boat is in use at Bristol docks, and this vessel is inspected periodically by the port sanitary inspector, and is cleansed and cement washed when necessary.

IV.—Infectious Disease.

(1) *Arrangements for detection of infectious disease on inward vessels* ·

The port medical officer of health is notified of cases of sickness on an inward vessel from the sources detailed below. If the ship is from foreign all cases of sickness on board are seen by the port medical officer. If these cases are found to be of an infectious nature requiring removal to hospital they are dealt with by him. In other cases of sickness where a doctor is not attached to the ship, the captain is advised to obtain the services of a local medical practitioner.

Where a local practitioner is called upon to attend any case of sickness at the port and where he has suspicion that the case is infectious he at once notifies the port medical officer of health.

(2) *Arrangements for notification to the Port Sanitary Authority of the arrival of inward vessels requiring special attention are as follows* :

(*a*) Local ship owners and agents notify the port medical officer of health of expected arrivals.

(*b*) Masters of locally owned vessels report by wireless to the owners the time they expect to arrive in port with information regarding the number of passengers and aliens on board and cases of sickness (if any).

(*c*) Information from Walton Bay signalling station before the ship has reached port.
Pilotage is compulsory to the three ports under the Bristol Port Authority, except for coastwise trading vessels not carrying passengers. Every pilot is supplied with a list of infected ports. Arrangements have been made whereby the pilots signal to the signalling station at Walton Bay information given to them relative to sickness and this information is transmitted to the port medical officer of health. A sum of £15 per annum is paid to the Walton Bay signal station as a retaining fee for such services

(*d*) H.M. Customs Officers, who are also supplied with the list mentioned above, board all inward vessels usually at the lock entrances. The officers render every possible assistance to the Port Sanitary Authority in this matter.

(*e*) A port sanitary inspector visits every ship immediately on arrival from a foreign port. The master or surgeon of every vessel arriving from a foreign port is required to fill in a form giving general information as to the health of the crew during the voyage and particulars of any sickness that has occurred.

(*f*) Wireless messages. Apart from messages received from vessels by the local owners and thence transferred to the port sanitary officer no arrangements exist for receiving direct wireless messages from ships.

(3) *What vessels are boarded on arrival, by whom, where, and how.*

All vessels from foreign arriving in Bristol, Avonmouth, or Portishead are boarded by a port sanitary inspector at the lock entrances or in the docks. The inspector immediately notifies the port medical officer of health of cases of infectious sickness that may be present on board or have occurred during the voyage, and of any serious infestation with rats or of the presence of dead rats. The port medical officer of health or his assistant visits such ships as soon as possible. In addition every ship from ports considered to be dangerous in regard to plague, cholera, yellow fever or smallpox is visited by a port medical officer of health.

(4) *Arrangements for disposal of cases of infectious disease and for observation or surveillance of contacts* :

Patients suffering from any infectious disease and cases that require to be kept under observation are removed to Ham Green Isolation Hospital, or, if smallpox to Novers Hill Hospital. Contacts of infectious cases if not removed to hospital are kept under observation by the port sanitary officers, and in the event of their proceeding to an address outside the city, the medical officer of health of the district concerned is advised.

(5) *Arrangements for disinfection of infected quarters, bedding, clothing, etc.*

Infected quarters are fumigated as soon as possible by means of sulphur, and by spraying with disinfectant ; and the bedding clothing, etc., is removed by means of motor vans to the disinfecting station, Bristol, and there disinfected by steam.

(6) *Arrangements for cleansing of persons* :

This is carried out at the bathing centre at the Bristol disinfecting station to which patients can be conveyed by the Committee's motor ambulance. Facilities are provided for bathing males and females, and trained nurses are available on the premises to supervise the operation.

(7) *Arrangements for ambulance transport*:

The motor ambulances belonging to the Bristol Health Committee are used for this purpose.

(8) *Arrangements for detection and treatment of venereal disease amongst sailors, are as follows*:

(*a*) Enquiries are made by the port sanitary inspectors of the responsible officers on the ship for the history of cases that may have reported during the voyage.

(*b*) Examination of the crews of ships by the port medical officer has resulted in the detection of a number of venereal cases not previously reported by the masters.

Leaflets stating the times of attendance at the Health Committee's venereal disease clinic are given to the masters of vessels, and treatment at this institution can be obtained free of cost to the patients. During 1929 thirty cases of venereal disease came under the notice of the port medical officer of health and in all instances the master of the vessel was advised to arrange for the attendance of the patient at the clinic.

The following particulars relate to seamen treated at the clinic during the year:

	Cases	Attendances	In-patients	In-patient days
Syphilis ...	45	181	4	107
Soft Sore ...	2	3	—	—
Gonorrhoea ...	78	258	5	120
Non-Venereal	27	62	—	—
Totals	152	504	9	227

Five of these men were found to have both syphilis and gonorrhoea and are included under both diseases.

Table I.—*Venereal disease on vessels, or disposed of prior to arrival,* 1929.

DOCKS	SHIP	DATE OF ARRIVAL	FROM (*Port*)	NO. OF CASES	TREATMENT OR DISPOSAL
Avonmouth	s.s. *Athelcrest*	22nd February	Demarara	1	Medical treatment recommended
Bristol	s.s. *Finse*	8th March	Valencia	1	Attended B.R.I. clinic
Avonmouth	s.s. *Serbino*	9th March	Basra	1	To attend B.R.I. clinic
Avonmouth	s.s. *Orebic*	15th March	Rosario	1	Left at Las Palmas
Bristol	s.s. *Teeco*	10th May	Oporto	1	Attended B.R.I. clinic
Avonmouth	s.s. *Gultaf E. Reuter*	17th May	Novorossisk	2	Attended B.R.I. clinic
Bristol	s.s. *Pentraeth*	8th June	Alexandria	1	Sent to hospital at Cardiff
Avonmouth	s.s. *Shahristan*	2nd July	Basra	1	Treated at B.R.I. clinic
Avonmouth	s.s. *Raila*	22nd August	Batoum	2	Treated at B.R.I. clinic
Avonmouth	m.v. *Vilga*	30th August	Batoum	8	Treated at B.R.I. clinic and by local doctor
Avonmouth	s.s. *Bahristan*	23rd September	Basra	1	Medical treatment recommended
Avonmouth	s.s. *British Chivalry*	20th October	Abadan	3	Treated at B.R.I. clinic
Avonmouth	s.s. *Bayano*	30th October	West Indies	1	Treated at B.R.I. clinic
Avonmouth	s.s. *Hoflaan*	5th November	San Nicholas	2	Treated at B.R.I. clinic
Avonmouth	s.s. *Lomas*	19th November	Rosario	1	Admitted to hospital at Rosario
Avonmouth	s.s. *British Isles*	12th December	Abadan	1	Attended B.R.I. clinic
Avonmouth	s.s. *Felix Tausig*	16th December	Los Angeles and Liverpool	1	Attended B.R.I. clinic
Avonmouth	s.s. *Ebani*	18th December	Lagos	1	Attended B.R.I. clinic
Avonmouth	s.s. *Aras*	20th December	Batoum	1	Attended B.R.I. clinic
Avonmouth	s.s. *Polly*	27th December	Tavina	1	Treated by local doctor and sent to Denmark

(9) *and* (10) *Arrangements for bacteriological examination* (*a*) *of rats and* (*b*) *others.*

Arrangements have been made with the pathological department of the Bristol University for the systematic examination of rats, and for any special examinations which may be required.

During the year under review 272 rats were examined for plague, 95 being from the ships at the ports and 177 from the sheds and quays at the docks. The number of rats examined increased during the year from 6.9 per cent. to 13.4 per cent. from ships and 0.9 per cent. to 3.5 per cent. from sheds and quays.

Grain-mite Dermatitis.

In August, 1929, two ships loaded with barley from Saffi in North Africa arrived at the Bristol port. Three days later two grain samplers who had visited these ships were reported to the health department as suffering from a very troublesome dermatitis. These cases were identified as cases of grain mite dermatitis, a condition which was fully investigated by the department in 1924. The following circular was forwarded to medical practitioners :—

" A number of cases of the above are occurring in Bristol amongst labourers working at barley imported from Morocco.

The disease is due to a mite, *pediculoides ventricosus,* which has been found in samples of the grain. This mite is not normally parasitic to man, but will bite the skin, thereby setting up a very itchy rash, which rises rapidly usually within a few hours after exposure. It does not burrow in the skin, and the ailment is not usually transferred from one person to another. The mite also occurs in cotton-seed.

The bite causes a papular rash, usually on the arms, neck, face, and to a lesser degree on the back and abdomen. Blisters and pustules may occur. As a rule no constitutional symptoms arise, except in occasional very severe cases or where secondary infection is set up by scratching. In such instances, there may be headache, malaise, and a slight rise of temperature ; this does not occur frequently.

Apart from the itching, the dermatitis does but little harm, as the parasite is not known either to cause disease or to transfer it, and does not persist on the human body ; the rash disappears after contact with the grain is discontinued.

Applications of soothing ointments, or warm baths containing a little soda, are useful to relieve the itching. In America, greasing the body, followed by a change of clothes and a bath after work has been found valuable as a preventive measure."

Cases of infectious sickness landed from vessels.

Table C

Disease	No. of cases during 1929	Average no. of cases for previous 5 years
Infectious diseases, including:		
Enteric fever	—	2·2
Typhus fever	—	—
Malaria	13	5·8
Smallpox	—	·2
Measles	1	·4
Scarlet fever	—	·4
Diphtheria	2	—
Influenza	15	3·0
Mumps	—	·6
Dysentery	1	·4
Erysipelas	—	·2
Chickenpox	—	1·2
Pulmonary tuberculosis	5	3·0
Other forms of tuberculosis ..	—	·8
Venereal diseases	30	17·4
Climatic bubo	3	·2
Totals	70	35·6

Other diseases not included in Table C above landed from vessels.

Disease	No. of cases during 1929	Average no. of cases for previous 5 years
Septic wounds	4	—
Cancer	—	·2
Tumour	—	·2
Rheumatism	2	·4
Beri-beri	—	1·0
Enlarged Spleen	1	—
Diseases of Nervous system ..	5	2·6
,, ,, Circulatory system ..	4	1·4
,, ,, Respiratory system ..	5	6·6
,, ,, Digestive system ..	14	7·2
,, ,, Genito urinary system	—	2·2
,, ..,, Skin & cellular tissue ..	10	2·2
,, ,, Bones & organs of locomotion	5	·4
,, ,, Congenital malformations, etc.	—	·2
Traumatism	7	7·2
Ill-defined diseases	2	2·4
Totals	59	34·2

Additional precautions against the introduction of plague were taken in the following instances:—

(1) On April 12th the s.s. *British Hope*, an oil tank, arrived at Avonmouth from Abadan. The crew was inspected and a greaser was found with an inflamed swelling in the left groin. He had no temperature and no pain apart from local tenderness. The history was obtained that some 5 weeks before a painful swelling had appeared in his groin and he was ill for a few days. He had been seen by doctors at Port Said and Abadan where the diagnosis of "inflamed gland" had been made. The man was admitted to Ham Green Isolation Hospital for investigation. The ship was thoroughly examined for the presence of rats, but no traces of any could be found. After pathological examination the diagnosis of climatic bubo was made.

(2) On June 6th the s.s. *City of Bath* arrived at Avonmouth from Rangoon (left 5th May, 1929) with a cargo of cotton seed, rice and bran. The captain reported one man, a Malay bo'sun, to have been off duty for 3 days. It appeared that the man first reported sick at Rangoon where he was admitted to hospital for a few days. At Colombo he had been treated for syphilis. At the present time he was unable to walk owing to a suppurating mass in the right groin. When the native crew was examined, a Tobaz was found with enlarged inguinal glands on both sides. Both cases were removed to Ham Green and detained for 4 days, at the end of which time, after a clinical and pathological examination, a diagnosis of climatic bubo was made in each case. In the meantime the ship was examined for indications of the presence of rats, but none were found.

Cases of infectious sickness on vessels during voyage but disposed prior to arrival.

Table D

Disease	No. of cases during 1929	Average no. of cases for previous 5 years
Infectious diseases, including :		
Enteric fever	2	1·4
Malaria	8	7·6
Smallpox	1	·6
Measles	—	—
Whooping cough	1	·2
Influenza	—	1·6
Mumps	—	·2
Cholera	—	·4
Dysentery	—	1·6
Plague	—	·4
Poliomyelitis	—	·2
Chickenpox	2	·2
Dengue fever	1	·4
Tetanus	—	·2
Pulmonary tuberculosis	—	1·0
Venereal disease	2	3·4
Totals	17	19·4

Other diseases not included in Table D above on vessels during voyage but disposed of prior to arrival.

Disease	No. of cases during 1929	Average no. of cases for previous 5 years
Abdominal tumour	—	·2
Rheumatism	—	·8
Beri-beri	—	·8
Enlarged spleen	—	·2
Diseases of Nervous system	—	1·6
,, ,, Circulatory system	1	2·0
,, ,, Respiratory system	—	2·4
,, ,, Digestive system	4	5·0
,, ,, Genito-urinary system...	1	·8
,, ,, Skin and cellular tissue	1	·8
,, ,, Bones and organs of locomotion	—	·4
Traumatism	1	4·4
Ill-defined diseases	2	2·6
Totals	10	22·0

Table II.—Infectious disease on vessels, or disposed of prior to arrival, 1929.

DOCKS	SHIP	DATE OF ARRIVAL	FROM (*Port*)	DISEASE	NO. OF CASES	TREATMENT OR DISPOSAL	REMARKS (Contacts for surveillance, etc.)
Avonmouth	s.s. *Ariguani*	20th January	Kingston, Jamaica	Pulmonary tuberculosis	1	Proceeding to Birmingham	Woman passenger
Avonmouth	s.s. *Camito*	8th March	Jamaica	Measles	1	Sent home (Bristol)	
Avonmouth	s.s. *Patuca*	27th March	Jamaica	Pulmonary tuberculosis	1	Passenger to London	
Avonmouth	s.s. *Pega*	8th April	Rangoon	Chickenpox	3	Landed at Port Said	
Avonmouth	s.s. *Cento*	11th April	Basra	Tuberculosis	1	Admitted to Ham Green Hospital	Patient died
Avonmouth	s.s. *British Hope*	12th April	Abadan	Climatic bubo	1	Admitted to Ham Green Hospital	
Avonmouth	s.s. *Nethergate*	4th June	Basra	Dysentery	1	Admitted to Ham Green Hospital	
Avonmouth	s.s. *City of Bath*	6th June	Rangoon	Climatic bubo	2	Admitted to Ham Green Hospital	
Avonmouth	s.s. *West Cobalt*	30th June	New Orleans and Belfast	Diphtheria	2	Admitted to Ham Green Hsopital	
Avonmouth	s.s. *Motagua*	3rd July	Kingston	Enteric fever	1	Left at Kingston	
Avonmouth	s.s. *Camito*	10th July	Kingston	Whooping cough	1	Treated by ship's surgeon	
Avonmouth	s.s. *Salaga*	2nd August	Sapela	Chickenpox	2	Sent to hospital at Sierra Leone	
Avonmouth	s.s. *Motagua*	14th August	Kingston	Paratyphoid abscess	1	Left at Kingston	
Bristol	s.s. *Etrib*	1st November	Smyrna	Dengue fever	3	Attended by doctor at Patras	
Avonmouth	s.s. *Motagua*	6th November	Kingston	Tuberculosis	1	Passenger for Netley Hospital	
Avonmouth	s.s. *Treloske*	29th November	Basra	Smallpox contact	1	Landed at Algiers with high temperature (Smallpox on vessel previously)	One of crew died of Smallpox at Basra
Bristol	s.s. *Gautatyr*	27th December	Saffi	? Tuberculosis	1	Sent to Hospital in Denmark Attended by local doctor	

Table III.—Deaths reported on arrival, 1929.

DOCKS	SHIP	DATE OF ARRIVAL	FROM (*Port*)	DISEASE	NO. OF CASES	TREATMENT OR DISPOSAL	REMARKS (Contacts for surveillance)
Bristol	s.s. *Saltom*	18th February	Holms	Found dead in bunk	1	Landed at Bristol	
Avonmouth	s.s. *Motagua*	10th April	Santa Marta	Syncope	1	Landed at Avonmouth	Ship's surgeon satisfied that this was a case of heart failure
Bristol	s.s. *Bristol City*	23rd May	New York	Heart disease	1	Buried at sea	
Avonmouth	s.s. *Glenaster*	17th October	Braila	Uraemia	1	Died at Braila	
Avonmouth	s.s. *Treloske*	29th November	Basra	Smallpox	1	Died in Hospital at Basra	Vessel placed in quarantine for 14 days at Basra
Avonmouth	s.s. *Yoma*	10th December	Rangoon	Alcoholic poisoning	1	Died at sea	
Avonmouth	s.s. *Daru*	28th December	West African ports	Malaria	1	Buried at sea	

V.—Measures against Rodents.

(1) *Steps taken for detection of rodent plague.*

As has been already stated every ship from foreign ports is boarded immediately on arrival by a port sanitary inspector and also by a port medical officer if from a plague infected or suspicious port. These officers make enquiries as to the condition of the ships regarding rats and always inspect the last certificate of deratisation or exemption.

During the ship's stay in the port and while the cargo is being discharged the ship is inspected for signs of rats. The port sanitary rat catchers set traps and make every effort to obtain samples of rats for pathological examination. Since March 1929, when all duties in connection with rat destruction in the city and port were transferred to the medical officer of health, all ships from foreign that had called, during the previous three months, at any port known to be plague infected or considered to be suspicious ships were dealt with as described.

The presence of a rat or any rats dead from no apparent cause is treated as urgent and any dead rats so classified are forwarded for immediate pathological examination.

Sampling of the rat population of the warehouses and sheds is done constantly and the presence of rodent plague excluded by pathological examination.

Tables E and F show the work done in this connection at the ports during 1929.

(2) *Measures taken to prevent the passage of rats between ships and the shore.*

The following precautions are taken on ships from plague-infected ports :—

> Where rat guards are carried by the vessel, these are applied to stop the passage of rats from the ship to the shore. Rat guards of a special pattern can be hired for a nominal fee from the Port Sanitary Authority. Owing to the inefficiency of rat guards generally the following additional precautions are taken. The mooring ropes are covered with tar which is kept moist, and freshly applied night and morning ; the same treatment is applied to the wire hawsers, and also to the manilla ropes by means of a piece of hessian cloth tied thereon. Gangways are kept raised whenever possible, or alternatively are well lighted during the night, and the sides and undersides kept moist by means of tar. Where there is evidence of the existence of an excessive number of rats on board, or in the case of suspected ships, the additional precaution is taken of booming the ships off the quayside by means of rafts, when the cargo is not being worked.

(3) *Methods of deratisation of:*

(*a*) *Ships.*

Trapping, fumigating with sulphur, and occasionally with hydrocyanic acid. Fumigation is usually carried out by a private firm under the supervision of the port sanitary inspector. The method adopted is with sulphur by burning, 3-lbs. of sulphur being allowed for each 1,000 c. ft. of space and the exposure lasting for eight hours. To ensure complete combustion of the sulphur, flattened trays have been specially made and these stand in larger trays containing water. Cotton waste well soaked in wood alcohol reaches through the sulphur to the bottom of the tray. This method has been found to give very good results.

Cyanide fumigation is performed by the spraying of liquid hydrocyanic acid. It is carried out by a private firm under the supervision of the port sanitary officers.

During 1929, 22 deratisation and 38 deratisation exemption certificates were issued. Deratisation was carried out by fumigation in every instance, 21 being done by sulphur and one by cyanide.

(*b*) *Premises in the vicinity of the docks and quays.*

Trapping and laying down of poisoned baits.

(4) *Measures taken for the detection of rat prevalence.*

(*a*) *In Ships.*

Under " steps taken for detection of rodent plague " the method of dealing with ships from foreign is discussed. In addition the port sanitary inspector boards all inward vessels and examines them for rat indications. This is part of the routine duties of the port inspectors.

During the year only one case of serious infestation with rats was discovered. The sailing vessel *Huogomont* arrived at Avonmouth from Australia on August 2nd, loaded with bags of wheat. The vessel had one hold only. During the discharge of the cargo it became apparent that the whole vessel was infested with rats. To await completion of discharge traps were laid and 21 black rats (*R. Rattus*) were caught of which five were sent for pathological examination. Special rat precautions were taken and when the vessel was empty it was fumigated with sulphur. Forty-two rats were picked up after fumigation making a total of 63 rats found in the ship.

(*b*) *On Shore.*

Frequent inspection of all sheds and warehouses in the vicinity of the docks is carried out by the port sanitary staff and traps and poisoned baits are laid wherever and whenever indications are found of the existence of rats.

An area of waste land within a few yards of the quay has been used for some years as a refuse tip. This forms an excellent food store and harbourage for rats. An attempt has been made to check this and there has been a great improvement during the last few months. Periodic concentrated attacks are made on the tip with poisoned baits, 7,000 baits being laid during the summer months, but only two dead rats were found. During the three months May to July, 8,200 poisoned baits were laid in the vicinity of the port, and only 102 dead rats were recovered.

5. *Rat-Proofing.*

(*a*) *and* (*b*) *ii. On Shore* :

As stated in my report for 1928 many of the sheds and warehouses on the quay side have been built or rebuilt during the last few years and may be considered to be ratproof. The co-ordination of the rat-catching staff in the health department has made it possible for all sheds and warehouses in the vicinity to be frequently inspected. With the co-operation of the occupiers of these premises, harborage has been much diminished and food material has been carefully protected. The result has already become evident to the occupiers in that there is much less damage done to property by the rodents.

(*b*) *i. On Ships* :

When ships are examined for indications of rats for the purpose of issuing a deratisation or deratisation exemption certificate, much attention is paid to the question of harborage. Before a certificate is issued the master of the ship has to remove the harborage to the satisfaction of the port medical officer of health.

RATS DESTROYED IN 1929

Table E. (1) *On Vessels.*

Number of Rats	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total in Year
Black	9	8	14	33 (8 mice)	59	77	80	96	32	94	117	85 (5 mice)	704
Brown	—	—	—	—	—	—	—	—	—	—	—	—	—
Species not recorded	—	—	—	—	—	—	—	—	—	—	—	—	—
Examined	3	—	1	7 (2 mice)	12	13	4	10	6	17	8	14	95
Infected with plague	—	—	—	—	—	—	—	—	—	—	—	—	—

Table F. (2) *In docks, quays, wharves and warehouses.*

Number of Rats	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total in Year
Black	—	—	—	37	54	91	73	91	158	166	187	144	1,001
Brown	—	—	—	269	296	269	305	263	263	271	265	231	2,432
Species not recorded	600*	425*	565*	—	—	—	—	—	—	—	—	—	1,590
Examined	8	16	16	10	25 (1 mouse)	18	15	14	19	18	11	7	177
Infected with plague	—	—	—	—	—	—	—	—	—	—	—	—	—

* Figures supplied by Port Authority rats officer

Table G

Particulars relating to plague " infected " or " suspected " vessels arriving in the port during 1929.

No plague " infected " or " suspected " vessels arrived in the port during 1929.

Table H

Measures of rat destruction on vessels from plague infected ports (other than those included in Table G) arriving in the port during 1929, *and number of certificates issued in respect of such vessels.*

Total no. of vessels arriving from plague infected ports	No. of such vessels fumigated with SO_2	No. of rats killed	No. of such vessels fumigated with HCN	No. of rats killed	No. of such vessels on which trapping, poisoning, etc. were employed	No. of rats killed	No. of such vessels on which measures of rat destruction were not carried out	No. of fumigation certificates issued on form " Port 11 "		No. of other certificates issued
								Deratisation	Exemption	
1	2	3	4	5	6	7	8	9	10	11
174	1†	—	1	5	91	298**	82	2	10	—

*143 vessels arrived once during the year
12 ,, ,, twice during the year
1 vessel ,, three times during year
1 ,, ,, four times during year
(One vessel was also inspected in Walton Bay on behalf of the Gloucester Port Sanitary Authority).

** Includes 8 mice.

† Trapping measures also employed on this ship.

Most of these vessels discharged only part cargo at Bristol docks

Table I

Measures of rat destruction on vessels (other than those included in Tables G and H) and number of certificates issued in respect of such vessels during 1929.

Vessels fumigated by SO_2 1	No. of dead rats recov-ered 2	Vessels fumigated by HCN 3	No. of dead rats recov-ered 4	Vessels on which trappings, poisoning etc. were employed 5	No. of dead rats recov-ered 6	No. of Certificates issued on form "Port 11"		No. of other certificates issued 9
						Deratisation 7	Exemption 8	
26*	167	—	—	54	234**	20	28	—

* Includes four vessels and two barges in regard to which no certificate was applied for. On one vessel trapping measures were also employed. ** Includes five mice.

VI. Hygiene of Crews' spaces.

Table J—Classification of Nuisances.

Nationality of vessel	Number inspected during 1929	Defects of original construction	Structural defects through wear and tear	Dirt, vermin and other conditions prejudicial to health
British	2,089	10	59	323
Other Nations ..	389	4	31	60
Totals	2,478	14	90	383

VII—**Food Inspection.**

(*Report by Mr. J. A. Robinson, Chief Port Sanitary Inspector*)

(1) (*a*) *Public Health* (*Imported Food*) *Regulations*, 1925.

The total quantity of food imported during the year has been well up to the average. Every consignment has received very careful inspection during the time of discharge, and afterwards in the Dock sheds and warehouses. Food invariably arrives in this port in good condition, and statutory proceedings have not been necessary during the year.

The quantities imported and dealt with include the following:

Fresh, frozen or canned meat, etc.

Frozen beef	3,750	qrs.
,, mutton and lamb	366,886	carcases.
,, pork	21,637	carcases.
,, pork legs	187	bags.
,, offal	163	packages
Cured or salted beef and pork	9	tons.
Bacon and hams	1,121	tons.
Canned meat	566	tons.
Canned fish	872	tons.

Fresh, dried and canned fruit, etc.

Bananas (7,495,354 bunches)	119,275	tons.
Green fruit	21,816	tons.
Dried fruit	8,627	tons.
Vegetables	12,059	tons.
Vegetables in brine	249	tons.
Canned fruit and fruit pulp	6,148	tons.

Other foods.

Butter, cheese and lard	17,778	tons.
Grain	774,665	tons.
Flour and meal	72,725	tons.

AMOUNT OF UNSOUND FOOD DESTROYED OR OTHERWISE DEALT WITH SO AS NOT TO BE USED FOR HUMAN FOOD.

Fresh or frozen meat, etc.

1 cow (bruised when landed)	
Mutton and lamb	10 carcases. 2 legs of mutton and 5 cwts. 1 qr. 6-lbs. trimmings.
Bacon	4 sides.
Hams	30.

Canned goods.

Apples	152 cases,	2 tins.
Apricots	230 cases,	14 tins.
Fruit salad	210 cases,	6 tins.
Ham		1 tin.
Loganberries	47 cases,	16 tins.
Lunch tongue	30 cases,	11 tins.
Peaches	621 cases.	
Pears	502 cases,	14 tins.

Canned goods—continued.

Pilchards	3 tins.
Pineapple	28 cases, 16 tins.
Plums	10 tins.
Pork and beans	12 tins.
Salmon	17 cases, 26 tins.
Spinach	1 tin.

Fruit and vegetables.

Apples	1 case.
Chestnuts	86 bags.
Grape fruit	69 cases.
Lemons	1 case.
Melons	53 cases.
Muscatels	124 cases.
Onions	75 cases.
Oranges	980 cases.
Raisins	6 boxes.
Sultanas	2 boxes.

Other foods.

Barley	36 bushels.
Maize	274 bushels.
Oats (rolled)	13 cases.
Wheat	801 bushels.
" Grape Nuts "	3,630 cases.
" Force "	8 packets.
" Instant Postum "	794 packets.
" Post Bran "	185 cases.
" Post Toasties "	2,467 cases.
Desiccated cocoanut	1,281 cases.
Lard	8 boxes.
Rice	430 bags.
Tea	164 chests.

(Quantities of foodstuff condemned owing to damage caused by the fire which occurred in the Royal Edward Warehouse at Avonmouth on 24th September, 1929, are included in the above figures.)

(*b*) *Public Health* (*Imported Milk*) *Regulations,* 1926.

No milk, or skimmed or separated milk was imported during the year.

(*c*) *Public Health* (*Preservatives, etc. in Food*) *Regulations.*

Samples of the following goods were submitted to the public analyst during the year, for analysis under these regulations :

Apples (evaporated)	15
Apricots (dried)	25
Pears (dried)	6
Peaches (dried)	3
Fruit Salad (dried)	21
Blackcurrant pulp	15

Gooseberry pulp	6
Plum pulp	8
Redcurrant pulp	3
Strawberry pulp	8
Raisins	52
Sultanas	40
Total	202

The results of these analyses shew that 190 samples contained sulphur dioxide in quantities not exceeding those specified in the regulations, and the remaining twelve samples gave the following results :

Raisins	0.095	per	cent.	sulphurous	acid	(SO_2)
	0.09	,,	,,	,,	,,	,,
	0.10	,,	,,	,,	,,	,,
	0.107	,,	,,	,,	,,	,,
	0.105	,,	,,	,,	,,	,,
Sultanas	0.089	,,	,,	,,	,,	,,
	0.08	,,	,,	,,	,,	,,
Dried apricots	0.257	,,	,,	,,	,,	,,
	0.228	,,	,,	,,	,,	,,
Plum pulp	0.163	,,	,,	,,	,,	,,
Blackcurrant pulp	0.183	,,	,,	,,	,,	,,
	0.156	,,	,,	,,	,,	,,

The importers of these goods were communicated with, and in cases where delivery had not been taken, the consignments were returned to the senders. Apparently raisins are imported under a guarantee which allows a ten days' period of grace in order to ascertain the amount of sulphur content. For this purpose separate samples were taken by the importers, and in some instances although the official samples showed an excess of sulphurous acid, the importers produced certificates from their analysts showing their samples taken from the same consignments contained less preservative than the limit allowed. Consequently delivery had been accepted, and by the time our analyses were completed a proportion of the goods had been distributed.

The different results obtained from analysis of different samples from the same " Mark " is attributable partly to the volatility of the sulphurous compound which substance tends to evaporate on exposure to air. It is also said that different fruit lying adjacent in the same package have absorbed the sulphur compound in varying proportion.

The problem at the present moment is receiving the consideration of the importers as well as that of the local authority.

(2) *Shellfish.*

There are no shellfish beds or layings within the jurisdiction of the Bristol Port Sanitary Authority.

(3) *Number of samples of food examined by* :

(*a*) *Bacteriologist.*

Four specimens of bacon were examined at the University of Bristol ; one of which was proved to be tubercular and the side of bacon was destroyed.

(*b*) *Analyst.*

One sample of tea was examined by the public analyst and found to have been damaged by dirty water.

Seven samples of water taken from vessels were examined, and the following results were obtained :

Water taken on board at :	*Result of analyses*
Bongie, Algeria	No chemical evidence of recent pollution, but open to suspicion by reason of the high chloride and oxidised nitrogen, and the presence of *B. Coli* in 5 cc.
Port Said	A soft water. Chemical and bacteriological figures indicate contamination.
Sfax and Oran	High chlorine and oxidised nitrogen probably due to a mineral source ; but water does not pass owing to presence of *B. Coli*.
Bahia Blanca & St. Vincent	The high figures for nitrate and chloride render the water open to suspicion, but this was only partially confirmed by bacteriological results.
River Danube	Open to suspicion by reason of the high combined chlorine and high agar count.
Casablanca	A very dangerous water with bad bacteriological figures.
Buenos Aires	The satisfactory bacteriological result hardly suggests that the high chloride is of excrementitious origin —the water therefore was considered acceptable.

Several water tanks in vessels were washed out, cleansed and cement-washed under the supervision of the port sanitary inspectors.

MISCELLANY

Dangerous Drugs Act. 1920.

(*Circulars Nos.* 357 *and* 1095)

The Port Sanitary Authority agreed to allow the assistant port medical officer to carry out any work in connection with these circulars. An occasion arose for the medical officer to utilise this authority when the s.s. *Kjoss* arrived at Avonmouth on October 3rd, 1929.

Report of Canal Boat inspection for the year 1929

(*by Mr. J. A. Robinson, Inspector of Canal Boats*)

Report in accordance with the requirements of section 3 of the Canal Boats Act, 1884, as to the work done in carrying out the regulations during the year 1929, with a summary of the contraventions and defects found in the canal boats examined.

1. The duties have been discharged by the chief port sanitary inspector and an assistant inspector whose other duties consist in the inspection of ships.

2. The number of inspections made was 52, and these were confined to four boats which were used regularly. No women or children are carried on board boats in this district.
3. Particulars of Inspection.
    - (*a*) *Registration.*—All boats have been registered at some time.
    - (*b*) *Notification of change of masters.*—This authority is not a registration authority, consequently no notifications were received.
    - (*c*) *Certificates.*—Certificates were produced when required.
    - (*d*) *Marking.*—All boats inspected were properly marked. Two boats were painted and re-numbered.
    - (*e*) *Overcrowding.*—None was discovered or reported.
    - (*f*) *Separation of sexes.*—No infringement was found.
    - (*g*) *Cleanliness.*—Cabins were kept fairly clean. No notices were served.
    - (*h*) *Ventilation.*—The regulation openings were available in all cases.
    - (*i*) *Painting of cabin interiors.* Two notices were served and complied with.
    - (*j*) *Provision of water casks.*—No contravention of the regulations was found. Two and four gallon stoneware jars are preferred in this district.
    - (*k*) *Removal of bilge water.*—Four notices were served and complied with.
    - (*l*) *Notification of infectious disease.*—No cases were found or reported.
    - (*m*) *Refusal to admit.*—None.
    - (*n*) *Dilapidation, etc.*—One overhead deck was repaired.
4. No legal proceedings were required.
5. Two notices were served to paint cabins; these were complied with and the boats were also re-numbered.
6. No notices were served to wash and cleanse.
7. Four notices were served to remove bilge water, and were complied with.
8. Any cases arising of an infectious nature would be dealt with and isolated by the Port Sanitary Committee.
9. No detention of boats was required.
10. No register kept.

Medical Inspection of Aliens

Annual return by the medical inspector of aliens for year ended 31st December, 1929.

Total no. of aliens arriving at the port, including those in transit and transmigrants, but excluding alien seamen (1)		No. of temporary visitors, i.e., aliens whose stay in this country will not exceed three months (2)			No. of aliens who intend to settle permanently or remain in this country for more than three months (3)		
Total number	No. subjected to medical inspection*	Total number	No. subjected to medical examination†	No. of certificates issued	Total number	No. subjected to medical examination†	No. of certificates issued
294	214	130	—	—	‡61	38	—

Medical Inspection of Aliens—*continued.*

ALIENS IN TRANSIT (4)			TRANSMIGRANTS (5)	
Total number	No. subjected to medical examination †	No. of certificates issued	Total number	No. subjected to medical examination †
118	—	—	—	—

* The term "inspection" relates to the preliminary inspection of aliens as they pass before the medical inspector.

† The term "medical examination" relates to detailed medical inspection.

‡ Of these, 17 (5 residents returning, 12 diplomats) were exempt from examination.

Particulars relating to detailed medical examination of aliens.

6. Aliens who were subjected to detailed medical examination and were not certified by medical inspector 25

7. Number of each of the following certificates issued by the medical inspector of aliens :
   (*a*) Certificate that an alien is a lunatic, idiot, or mentally deficient .. .. —
   (*b*) Certificate that, for medical reasons, it is undesirable that an alien should be permitted to land .. —
   (*c*) Certificate that an alien is suffering from some disease, defect or deformity, which may interfere with his capacity to support himself or his dependents —
   (*d*) Certificate than an alien is suffering from one of the acute infectious diseases .. .. —
   (*e*) Certificate that for the purposes of an adequate medical examination, it is necessary for the alien to land in order that he may be examined ashore —

Transmigrants.

8. Number of certificates of the cleansing of verminous transmigrants given by the medical inspector of aliens to the immigration officer .. .. —

9. Number of medical certificates in respect of transmigrants suffering from trachoma, fevers, etc., given to the immigration officer .. .. —

Particulars relating to alien traffic.

10. Total number of passenger vessels carrying aliens which arrived during the year 78
    Number of passenger vessels dealt with by inspector of aliens 48

11. Total number of cargo vessels carrying alien passengers which arrived during the year 16
    Number of cargo vessels dealt with by inspector of aliens 6

12. Any other vessels in connection with which the medical inspector has had to take action in regard to aliens —

BRISTOL
The W. B. Harris Printing Company Ltd.
Narrow Wine Street.